about it, that there is yet another irregularity in the Tides, which never fails, and is no leſs extraordinary, than what I have been mentioning: which is, That, whereas between the *Vernal* and *Autumnal Equinoxes*, that is, for ſix Moneths together, the Courſe of irregular Tides about the Quartermoons, is, to run all day, that is, twelve hours, as from about $9\frac{1}{2}$ to $9\frac{1}{2}$, $10\frac{1}{4}$ to $10\frac{1}{4}$ &c. *Eaſtward*, and all night, that is, twelve hours more, *Weſtward*: during the other ſix Moneths, from the *Autumnal* to the *Vernal Equinox*, the Current runs all day *Weſtward*, and all Night *Eaſtward*.

Of this, though I had not the opportunity to be an Eye-witneſs, as of the other, yet I do not at all doubt, having received ſo credible Information of it.

To penetrate into the *Cauſes* of theſe ſtrange Reciprocations of the Tides, would require exact deſcriptions of the Situation, Shape, and Extent of every piece of the adjacent Coaſts of *Euſt* and *Herris*; the Rocks, Sands, Shelves, Promontorys, Bays, Lakes, Depths, and other Circumſtances, which I cannot now ſet down with any certainty, or accurateneſs; ſeeing, they are to be found in no *Map*, neither had I any opportunity to ſurvey them; nor do they now occur to my Memory, as they did ſome years ago, when upon occaſion I ventured to make a *Map* of this whole *Frith* of *Berneray*, which not having copied. I cannot adventure to beat it out again.

Monſieur Auzout's *Judgment touching the Apertures of* Object-Glaſſes, *and their* Proportions, *in reſpect of the ſeveral* Lengths *of* Teleſcopes.

This Author, obſerving in a ſmall *French Tract* lately written by him to a Countryman of his, Monſieur *L' Abbe Charles*; That great *Optick Glaſſes* have almoſt never as great an *Aperture* as the ſmall ones, in proportion to what they Magnifie, and that therefore they muſt be more dim; takes occaſion to inform

the *Reader*, that he hath found, that the *Apertures*, which *Optick-Glaſſes* can bear with diſtinctneſs, are in about a *ſubduplicate proportion* to their *Lengths*; whereof he tells us he intends to give the reaſon and demonſtration in his *Diopticks*, which he is now writing, and intends to finiſh, as ſoon as his Health will permit. In the mean time, he preſents the *Reader* with a *Table* of ſuch *Apertures*: which is here exhibited to the Conſideration of the Ingenious, there being of this *French* Book but one Copy, that is known, in *England*.

A *TABLE* of the *Apertures* of *Object-Glaſſes*.

The Points put to ſome of theſe Numbers denote Fractions.

Lengths of Glaſſes.	*For excellent ones.*		*For good ones.*		*For ordinary ones.*		*Lengths of Glaſſes.*	*For excellent ones.*		*For good ones.*		*For ordinary ones.*	
Feet, Inches.	*Inch.*	*Lines.*	*Inch.*	*Lines.*	*Inch.*	*Lines.*	*Feet, Inches.*	*Inch.*	*Lines.*	*Inch.*	*Lines.*	*Inch.*	*Lines.*
	4	4.	4		3		25	3	4	2	10	2	4.
	6	5.	5		4		30	3	8	3	2	2	7.
	9	7	6		5		35	4	0	3	4.	2	10
1	0	8.	7		6		40	4	3	3	7	3	.
1	6	9	8.		7		45	4	6	3	10	3	2.
2	0	11	10		8		50	4	9	4	0	3	4.
2	6	1 0	11		9		55	5	0	4	3	3	6.
3	0	1 1	1	0	10		60	5	2	4	6	3	8.
3	6	1 2.	1	1	11		65	5	4	4	8	3	10
4	0	1 4	1	2	1	0	70	5	7	4	10	4	.
4	6	1 5	1	3	1	.	75	5	9	5	0	4	2.
5	0	1 6	1	4	1	1.	80	5	11	5	2	4	5
6		1 7.	1	5	1	2	90	6	4	5	6	4	7.
7		1 9	1	6	1	3	100	6	8	5	9	4	10
8		1 10	1	8	1	4	120	7	5	6	5	5	3
9		1 11	1	9	1	5	150	8	0	7	0	5	11
10	2	1 1	1	10	1	6	200	9	6	8	0	6	9
12	2	4 2	0	1	1	8	250	10	6	9	2	7	8.
14	2	6 2	2	1	1	9.	300	11	6	10	0	8	5
16	2	8 2	4	1	1	11.	350	12	6.	10	9	9	0
18	2	10 2	6	2	1		400	13	4	11	6	9	8
20	3	0 2	7	2	2.								